

Ex. No: 7**Date:12/09/2025**

SNORT IDS

AIM:

To demonstrate Intrusion Detection System (IDS) using snort tool.

ALGORITHM:

1. Update the system using the package manager.
2. Install Snort 3 along with required libraries such as libpcap.
3. Verify the Snort 3 installation using the version command.
4. Create the necessary directories for rules and logs.
5. Create a custom rule file (local.rules) and add an ICMP alert rule.
6. Edit the Snort 3 configuration file (snort.lua) to load the custom rule file.
7. Identify the active network interface using the ip a command.
8. Start Snort 3 in IDS mode using the configuration file and the selected interface.
9. Generate ICMP traffic by pinging an external site from another terminal.
10. Open the Snort log directory and view the alert entries created for the ICMP packets.

COMMANDS :

```
sudo apt update
```

```
sudo apt install snort3 libpcap-dev -y
```

```
snort3 -V
```

```
sudo mkdir -p /etc/snort/rules
```

```
sudo mkdir -p /var/log/snort
```

```
sudo nano /etc/snort/rules/local.rules
```

(Inside local.rules)

```
    alert icmp any any -> any any (msg:"ICMP Ping Detected - Snort3";  
    sid:1000001; rev:1;)
```

```
sudo nano /etc/snort/snort.lua
```

```
ip a
```

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sudo snort3 -c /etc/snort/snort.lua -i eth0

(Open another terminal)

ping yahoo.com

OUTPUT:

```
(JackSparrow@Captain)-[~]
$ snort --version

    '-
  o")~
    ''

-*> Snort++ <*-
Version 3.1.82.0
By Martin Roesch & The Snort Team
http://snort.org/contact#team
Copyright (C) 2014-2024 Cisco and/or its affiliates. All rights reserved.
Copyright (C) 1998-2013 Sourcefire, Inc., et al.
Using DAQ version 3.0.12
Using LuaJIT version 2.1.1700206165
Using OpenSSL 3.5.2 5 Aug 2025
Using libpcap version 1.10.5 (with TPACKET_V3)
Using PCRE version 8.39 2016-06-14
Using ZLIB version 1.3.1
Using LZMA version 5.8.1
```

```
(JackSparrow@Captain)-[~]
$ ping yahoo.com
PING yahoo.com (74.6.231.20) 56(84) bytes of data.
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=1 ttl=52 time=348 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=2 ttl=52 time=371 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=3 ttl=52 time=292 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=4 ttl=52 time=314 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=5 ttl=52 time=337 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=6 ttl=52 time=360 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=7 ttl=52 time=282 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=8 ttl=52 time=302 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=9 ttl=52 time=325 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=10 ttl=52 time=348 ms
64 bytes from media-router-fp73.prod.media.vip.net.yahoo.com (74.6.231.20): icmp_seq=11 ttl=52 time=370 ms
```

```
(JackSparrow@Captain)-[~]
$ sudo snort -c /etc/snort/snort.lua -i eth0
[sudo] password for JackSparrow:

-----
o")~   Snort++ 3.1.82.0
-----

Loading /etc/snort/snort.lua:
Loading snort_defaults.lua:
Finished snort_defaults.lua:
```

```
pcap DAQ configured to passive.
Commencing packet processing
++ [0] eth0
^C** caught int signal
== stopping
-- [0] eth0

-----
Packet Statistics
-----
daq
    received: 119
    analyzed: 119
    allow: 119
    rx_bytes: 11102

-----
codec
    total: 119      (100.000%)
    arp: 10         ( 8.403%)
    eth: 119        (100.000%)
    icmp4: 109      ( 91.597%)
    ipv4: 109       ( 91.597%)

-----
Module Statistics
-----
appid
    packets: 109
    processed_packets: 109
    total_sessions: 1

-----
arp_spoof
    packets: 10

-----
binder
    raw_packets: 10
    new_flows: 1
    inspects: 11

-----
detection
    analyzed: 119

-----
port_scan
    packets: 109
    trackers: 2

-----
stream
    flows: 1

-----
stream_icmp
    sessions: 1
    max: 1
    created: 1
    released: 1

-----
Summary Statistics
-----
process
    signals: 1

-----
timing
    runtime: 00:01:17
    seconds: 77.271477
    pkts/sec: 2

o")~ Snort exiting
```

RESULT:

Thus, the Intrusion Detection System (IDS) has been successfully demonstrated using snort.